Commonwealth of Kentucky
Division for Air Quality

PERMIT APPLICATION SUMMARY FORM

Completed by: John Jump

GENERAL INFORMATION:

Name:	Federal-Mogul Corporation formerly Abex Friction Products
Address:	20 Aberdeen Road, Glasgow, Kentucky 42121
Date application received:	December 28, 1998
SIC/Source description:	3714
AFS(10-digit) Plant ID:	21-009-00069
EIS #:	105-0160-0069
Application log number:	F952
Permit number:	F-99-008

APPLICATION TYPE/PERMIT ACTIVITY:

[X] Initial issuance
[ ] Permit modification
__Administrative
__Minor
__Significant
[ ] Permit renewal
[ ] General permit
[X] Conditional major
[ ] Title V
[ ] Synthetic minor
[ ] Operating
[X] Construction/operating

COMPLIANCE SUMMARY:

[ ] Source is out of compliance
[ ] Compliance certification signed
[ ] Compliance schedule included

APPLICABLE REQUIREMENTS LIST:

[ ] NSR [ ] NSPS [X] SIP
[ ] PSD [ ] NESHAPS [ ] Other

MISCELLANEOUS:

[ ] Acid rain source
[ ] Source subject to 112(r)
[X] Source applied for federally enforceable emissions cap
[ ] Source provided terms for alternative operating scenarios
[ ] Source subject to a MACT standard
[ ] Source requested case-by-case 112(g) or (j) determination
[ ] Application proposes new control technology
[ ] Certified by responsible official
[X] Diagrams or drawings included
[X] Confidential business information (CBI) submitted in application
[ ] Pollution Prevention Measures
[ ] Area is non-attainment (list pollutants):

EMISSIONS SUMMARY:

Pollutant	Actual (tpy)	Potential (tpy)
PM	9.85	9.85
SO_2	0.111	0.111
NOx	17.1	17.1
CO	14.4	14.4
VOC	53.19	53.19
LEAD	0.67	0.67
HAP ≥ 10 tpy (by CAS)	HAP emissions are limited to 9 tpy on an individual basis (9.5 tpy Phenol) and 22.5 tpy combined.	HAP emissions are limited to 9 tpy on an individual basis (9.5 tpy Phenol) and 22.5 tpy combined.

SOURCE PROCESS DESCRIPTION:

Federal-Mogul submitted a construction/operation application that was received by the Division on May 17, 1996. They were issued permit S-96-203 on June 18, 1996. A comprehensive application to modify existing operations and install new equipment was received by the Division on December 28, 1998. Federal-Mogul has asked that a federally enforceable permit be written that requires particulate control. This keeps their potential to emit PM_{10} under the major source threshold. Federal-Mogul has also requested federeally enforceable limits to keep their potential to emit HAPs below major source levels.

Raw materials are received in bags, totes, and bulk silos and placed in an automated distribution and conveying system. The appropriate amount of each raw material is conveyed to mixers where the brake block formula is blended. The formulas are then transfered to the preform presses where they are pressed and exposed to elevated temperature for a short period of time. From there the fragile brake blocks are transfered to the cure presses for furthur temperature and pressure treatment. The solid brake blocks exiting the cure presses are then furthur cured in the curing ovens. After final curing in the cure ovens, the brake blocks are transferred to the finishing area. The brake blocks are cleaned and trimmed by grinding. Holes may also be drilled into the brake blocks. An inkjet operation is also utilized in this area to print logos onto the brake blocks.

EMISSION AND OPERATING CAPS DESCRIPTION:

Particulate Control

Federal-Mogul has asked that a federally enforceable permit be written that requires particulate control. This keeps their potential to emit PM_{10} under the major source threshold.

HAPS

Federal-Mogul has also requested federally enforceable limits to keep their potential to emit HAPs below major source levels. The HAP source emissions limitation is detailed as follows. HAPs are not emitted at the following emission points.

01 Three (3) Calcium Carbonate Storage Silos
02 Three (3) Barium Sulfate Storage Silos
07 Four (4) Parts Cleaners
08 Eight (8) Natural Gas Fired Space Heaters

Information on any changes that result in HAP emissions at these points shall be submitted for prior approval by the Division.

Emission Limitations:

The plant wide emissions of any single HAP with the exception of Phenol, shall not exceed 9 tons per consecutive twelve (12) month period. The plant wide emissions of Phenol shall not exceed 9.5 tons per consecutive twelve (12) month period. The plant wide emissions of any combination of HAPs shall not exceed 22.5 tons per consecutive twelve (12) month period. The source has elected to accept limits to preclude the requirement of a Title V permit.

The following emission points are subject to the plant wide allowables for HAPs.

EP #03 Three (3) Compounders / Mixers
EP #04 Twenty (20) Cure Presses
EP #05 Nine (9) Natural Gas Fired Cure Ovens
EP #06 Finishing / Printing

Compliance Demonstration Method:

An emission factor in units of pounds emitted per ton of material processed shall be determined for each HAP emitted at each emission point according to the following formula.

Emission Factor = R x H

Where R is the amount of material released into the air in units of pounds of material released per ton of material used. H is the weight fraction of a HAP in the material being used. The amount of HAP contained in any material that is used shall be determined from a material safety data sheet. For any material where the MSDS lists a range for the weight fraction of a HAP contained in a material, the highest value shall be used as H. Under circumstances such that a value for H cannot be determined from a MSDS or an alternate method of determining H is desired, the alternate method shall be priorly approved by the Division. The values for R for each emission point are listed in Table D.1. The H and R values for emission point 04 Twenty (20) Cure Presses and emission point 05 Nine (9) Natural Gas Fired Cure Ovens are listed in Table D.2. If at any time due to a changing of materials used or for any other reason, additional HAP emissions are expected, calculations and MSDS shall be submitted to the Division for prior approval.

Table D.1

Emission point	**R (pounds/ton)**
03 Three (3) Compounders / Mixers	2
04 Twenty (20) Cure Presses	See Table D.2
05 Nine (9) Natural Gas Fired Cure Ovens	See Table D.2
06 Finishing / Printing	200 pounds/ton

06 Finishing / Printing (cleaner and inks)	2000 pounds/ton

Table D.2

	04 Twenty (20) Cure Presses		05 Nine (9) Cure Oven	
HAP	**H (lb/lb)**	**R (pounds/ton)**	**H (lb/lb)**	**R (pounds/ton)**
Formaldehyde	0.01584	0.108	0.01584	0.012
Phenol	0.011507	54	0.011507	6
Styrene	0.00000055	180	0.00000055	20
Acrylonitrile	0.000001	1800	0.000001	200
1,3-Butadiene	0.00000055	180	0.00000055	20

Monthly Total for each HAP

The following formula shall be used to determine the emissions of each HAP at each emission point and from each material used unless an alternate demonstration method is approved by the Division.

$$\text{Monthly Individual HAP Emissions} = \sum_{n=1}^{N} [M_n \times \text{Emission Factor}_n \times (1-CE_n)]/2000$$

Where the monthly individual HAP emissions are summed to include each material or release point for an individual HAP. M_n is the monthly amount of a material used in tons and Emission Factor_n is the emission factor in pounds per ton for a particular HAP in the material or at a point. CE_n is the control efficiency of any controls operated at a given emission point that control the pollutant being considered. The value used as control efficiency shall be the value listed in Section B of this permit. The control efficiency for emission point 06 does not apply to cleaners or inks. Any different or additional control efficiencies that are used must be priorly approved by the Division.

Consecutive Twelve (12) Month Total for each HAP

The monthly total for an individual HAP should then be summed according to the following equation.

$$\text{Total Individual HAP Emissions} = \sum_{n=1}^{N} \text{Monthly Individual HAP Emissions}_n$$

Where the individual HAP emissions are summed over twelve (12) months.

Monthly Total for Combined HAPs

The following formula shall be used to determine the monthly total for combined HAP emissions.

$$\text{Monthly Combined HAP Emissions} = \sum_{n=1}^{N} \text{Monthly Individual HAP Emissions}_n$$

Where all HAP emissions are summed for an individual month.

Consecutive Twelve (12) Month Total for Combined HAPs

$$\text{Total Combined HAP Emissions} = \sum_{n=1}^{N} \text{Monthly Combined HAP Emissions}_n$$

Where monthly combined HAP emissions are summed over twelve (12) months.

Specific Recordkeeping Requirements:

The following records shall be maintained.

- Monthly usage records for all materials containing HAPs.
- The monthly calculated HAP emissions for each HAP.
- Consecutive twelve (12) month emission totals for each HAP.
- The monthly calculated combined HAP emissions.
- Consecutive twelve (12) month emission totals for combined HAPs.

Specific Reporting Requirements:

A report of the consecutive twelve (12) month totals of HAP emissions for each HAP and combined HAPs shall be submitted every six months in accordance with Section F. 5. And F. 7. e. A report of any exceedance of the HAP emissions limitations shall be submitted within thirty days of when the exceedance is determined.